

OMNIAGIN, M. L., ed.

Cutters for high-speed metal cutting; experience of heavy machinery plants
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 37 p.
(54-38725)

TJ1230.U5

1. Cutting machines. 2. Metal-cutting. I. Moscow. Vsesoiuznyi proektno-tekhnologicheskii institut.

ABANOV, L.V.; AL'SHITS, I.Ya.; BERDICHEVSKIY, Ya.G.; KODNIR, D.S.;
UMNYAGIN, M.G.; USTYUZHANINOV, M.I.; KOROLEV, A.A., kandidat
tehnicheskikh nauk, redaktor; POPOVA, S.M., tehnikeskiky re-
daktor

[Liquid friction bearings for rolling mills] Podshipniki zhidkost-
nogo trenia prokatnykh stanov. Moskva, Gos. nauchno-tekhn. izd-
vo mashinostroit. lit-ry, 1955. 195 p. (MLRA 8:6)
(Bearings (Machinery))

UMNYAGIN, M.G.
ZUBOK, V.N., inzhener, redaktor; UMNYAGIN, M.G., inzhener, redaktor;
KASSATSIK, M.S., inzhener, redaktor; SHIFRIN, S.M., redaktor;
TYEMKIN, A.V., redaktor; TIKHONOV, A.Ya., tekhnicheskii redaktor.

[Experience in introducing advanced technology in factories engaged in heavy machine building] Opyt vnedreniia peredovoi tekhnologii na zavodakh tiazhelogo mashinostroeniia. Pod obshchei red. V.N.Zubok, M.G.Umniagina. Moskva, Gos. nauchno-tekhn. iss-vo mashinostroit. lit-ry. 1955. 306 p. (MLRA 9:4)
(Machinery--Construction)

1. Moscow. Vsesoyuznyi proyektno-tekhnologicheskii institut.

UMNYAGIN, M.G., inzh.

Over-all mechanization and automation in the heavy machinery industry. Mashinostroitel' no.2/3:4-11 N-D '56. (MIRA 12:1)

1. Direktor Vsesoyuznogo proyektno-tekhnologicheskogo instituta Ministerstva tyazhelogo mashinostroyeniya SSSR.
(Automation) (Factory management)

UMNYAGIN, M. G.

AID P - 4277

Subject : USSR/Engineering

Card 1/ Pub. 128 - 2/25

Author : Umnyagin, M. G., Engineer, Laureate of the Stalin Prize

Title : Some questions relative to the technological development of heavy machine building.

Periodical : Vest. mash., #2, p. 5-9, F 1956

Abstract : Many branches of industry (metallurgical, power, mining, coal and oil etc.) require steadily larger and heavier machine units which must be produced in limited numbers on special lathes, forging and stamping machines, etc. In order to make such machine building more efficient and economical, the author advocates concentrating the production of one type of machine in one plant instead of many, modernizing the plants' equipment, applying new machine building methods, installing more automation in many machine shops, etc.

Vest. mash., #?, p. 5-9, F 1956

AID P - 4277

Card 2/2 Pub. 128 - 2/25

Institution : None

Submitted : No date

U MNYAGIN, M.G.

122-5-10/35

AUTHOR: Umnyagin, M.G.

TITLE: Some Problems in the Development of Heavy Engineering Manufacture (Nekotoryye voprosy razvitiya tekhnologii tyazhelogo mashinostroyeniya)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, ^{vol. 37} Nr 5, pp.25-32 (USSR)

ABSTRACT: Development trends and plans are discussed. The specialisation of manufacture will lead to the concentration of certain plants on specific sub-assemblies, e.g., gear-boxes. The maximum amount of metal forming prior to machining is to be practiced. The electric-slag method of welding large cross-sections is to be extended from a maximum wall thickness of 500 mm to 800 mm. The so-called sectional hot die-stamping applied to the forging of crankshafts has solved the problem of producing such accurate forgings of over a ton weight with a large economy in alloy steel. Investment castings and hot rolling of gear teeth are mentioned. The mechanisation of handling in heavy engineering plants is constantly improved. Forging manipulators and handling equipment for automatic and semi-automatic welding are mentioned. Mechanised production lines for the batch manufacture of typical structural frame assemblies for crane and other handling equipment

Card 1/3

122-5-10/35

Some Problems in the Development of Heavy Engineering Manufacture.

construction is in preparation. The replacement of scraping by grinding is proceeding. Centralised manufacture of hydraulic and pneumatic pressure generating units is under way. A heavy pneumatic actuator and a horizontal dividing table with electrical drive are illustrated. The introduction of unit-type electro-mechanical machining heads is discussed. The setting-up of special machining installations for typical groups of components is reported under the heading of "intensification of production processes". Examples are given of the speeding up of drilling, screw-cutting and broaching. The use of complex set-ups for the simultaneous carrying out of several machining operations in small batch manufacture is illustrated. Combined mechanical and electrical machining methods are being introduced. Surface finishing by rolling and the speeding-up of press-forming, welding, and heat treatment operations is shown. Many plants are introducing standard planning charts of typical machining operation groups. In one instance of electric bridge crane manufacture, 973 different machining sequences have been reduced to 100. The variety of production planning tasks has been reduced from 4000 to 334 different components. The

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122-5-10/35

Some Problems in the Development of Heavy Engineering Manufacture.
modernisation and specialisation of machining plant is reported with examples of foreign and Soviet heavy machinery. Standardisation of components has permitted the introduction of numerous continuous production lines in heavy engineering. There are 10 illustrations, including 5 photographs.

AVAILABLE: Library of Congress.

Card 3/3

SOV-135-58-3-2/19

AUTHORS: Umnyagin, M.G. and Zhivotinskiy, L.A., Engineers

TITLE: Complex Mechanization and Automation of Welding Processes in Heavy Machine-Building (Kompleksnaya mekhanizatsiya i avtomatizatsiya protsessov izgotovleniya zvarnykh izdeliy v tyazhelo mashinostroyenii)

PERIODICAL: Svarochnoye proizvodstvo, 1968, Nr 3, pp 4-7 (USSR)

ABSTRACT: Information is presented on the development of complex mechanization of the welding process in the heavy machine-building industry. The following installations brought into use are described and illustrated 1) a production line for welding main beams of overhead travelling cranes (illustrated by a diagram of the entire line and photographs of its components); 2) an installation for welding spherical container bottoms; 3) an installation for electric slag welding of thick-walled drums; 4) a universal electric-slag welding installation for large size work; 5) welding manipulators; 6) an experimental installation for mechanized oxygen cutting of shaped pipes (samples of cuts made with this machine are shown in a photograph. There are 11 photographs and 1 diagram.

Card 1/2

SCV-135-58-3-2/19

Complex Mechanization and Automation of Welding Processes in Heavy Machine-Building

ASSOCIATION: Vsesoyuznyy proyektno-tekhnologicheskii institut tyazhelo^o mashinostroyeniya (All-Union Institute for Technology and Design of Heavy Machine-Building)

1. Welding--Equipment 2. Welding--Applications

Card 2/2

S/122/60/000/008/001/006
A161/A029

AUTHORS: Vinogradov, K.K., Umyagin, M.G., Kharaker, G.M., Engineers

TITLE: Heavy Machine Building Development in the Seven-Year Plan 14

PERIODICAL: Vestnik mashinostroyeniya, 1960, No. 8, pp. 7-17

TEXT: A general review is made of the development planned for 1959-1965 in the production of equipment for electric power plants, metallurgy, mining, oil and gas industry and in the production technology of machine works that have to build the equipment. For heat power plants single steam turbines will be developed, mainly condensation turbines of 300,000 kw with an initial steam pressure of 240 atm and 580°C, and a few 600,000 kw turbines; condensation turbines of 150 and 200 thousand kw with 130 atm and 565°C; heating turbines with steam bleeding for industrial use, of 50 and 100 thousand kw and 130 atm/565°C, and some of 12 and 25 thousand kw. Experimental sets will be built for 300 atm/650°C and higher. Gas turbines will be built for 25 and 50 thousand kw and 750-800°C gas temperature (the maximum before 1959 was 12 thousand kw and 650°C). Single gas turbines of up to 100 thousand kw are planned. Large-scale output of 4,000, 6,000 and 9,000 kw gas turbines is under preparation for compressor stations on

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S/122/60/000/008/001/006
A161/A029

Heavy Machine Building Development in the Seven-Year Plan

long-distance gas pipe lines. Gas turbines will be used in railroad transport, the metallurgical and oil industry. The power of single water turbines will be raised to 300,000 kw. One of the major tasks at the time being is the development of 215,000 kw turbines for the Bratskaya GES (Bratsk Hydroelectric Power Plant). Turbocompressors will be built of up to 150,000 m³/hour capacity and 8-9 atm pressure; blast furnace compressor pressure will be raised to 3.8-4.2 atm. Boilers of two or three different designs for different fuel have to be developed for 200,000 and 300,000 kw steam turbines; with 810 ton/hour steam capacity and 315 atm for the 300,000 kw turbines; and of 950 and 1,900 ton/hour and 140 atm and 570°C; 250 atm and 585°C. In the metallurgical industry, a blast furnace with 1,719 m³ volume will be used in the main part; 1,003, 1,386 and 1,513 m³ furnaces will also be built; the first 2,000 m³ furnace is being built in 1960, and in 1961 equipment for 2,700 m³ volume blast furnaces will be produced. The first 2,700 m³ furnace has to be built in 1962. Steel output will be increased mainly by designing 500-600 tons and larger open-hearth furnaces. The oxygen process in converters is coming into use. The annual output of 65-70 million tons of rolled steel (at least 35 % of it sheet) to be reached by 1965 will take new rolling mills with automatic control; the continuous rolling

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ling process can eliminate the roughing mills (blooming and slabbing mills) if the new equipment combining the continuous teeming unit and the rolling mill will be a success. The rolling speed already reached is high: 11-12 m/sec in continuous sheet mills; 15-18 m/sec in continuous merchant mills and 25-30 m/sec in wire mills. But higher speeds are needed and the rolling mills must be built in a shorter time. Planetary mills and multi-roll mills for 0.1-m sheets of common and special steel, heavy and light nonferrous metals and very thin 1-2-micron bands of high-melting and rare metals are mentioned as becoming very important. The number of tube rolling mill types is low compared with foreign practice. A new cold tube mill type is developed rolling thin-walled tubes with high surface finish (wall thickness less than 1/100 of diameter). The finishing (eliminating defects, piling, marking, sorting, etc.) occupying 80 % of labor must be mechanized. In the ore-mining industry, more than 150 new machines have to be developed, including multibucket wheel excavators with overburden bridge of up to 3,000 m³/hour capacity; one-bucket excavators with 25, 30 and 50 m³ bucket. In coal mines work has to be mechanized or automated; dislodging of coal by hydraulic means has to be raised 10 times. About 700 new coal mining machine types

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Heavy Machine Building Development in the Seven-Year Plan

have to be produced. One example is a stoping machine set with a cutter-loader for 0.85 to 1.8-m flat coal seams, with hydraulic propping system. In the oil and gas industry the output of drilling equipment has to be doubled and the drilling speed raised. The well diameters will be reduced. Turbo-drills and electric drills of new designs will be used. For off-shore drilling new equipment is needed for drilling at longer distance from the shore, as well as for 8 to 10 thousand meter depths. The oil refineries will be equipped for a 2 million tons annual output instead of 600,000 tons by 1952-1958. For foundries of machine building works the mechanization problem seems to be solved in two reconstruction projects developed by VPTI tyazhelogo mashinostroyeniya (VPTI of Heavy Machine Building) for the Uralmashzavod and the Elektrostal'skiy zavod tyazhelogo mashinostroyeniya (Elektrostal' Heavy Machine Building Works). The Uralgi-protyazhmash institute participated in the projects. Casting of up to 800 kg will be produced in three semi-automatic production lines placed across the six bays of the foundry and each bay will be "specialized"; 2-3-ton castings will be produced in separate plots with modernized 17-ton molding machines and a 40-ton table; large castings weighing 30-40 tons will be made in special mecha-

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A161/A029

Heavy Machine Building Development in the Seven-Year Plan

nized casings ("caissons"), and very large castings of up to 150 tons in reinforced concrete casings, using catilever sand slingers of 40-50 m³/hour capacity. Cores will be made on 12 lines. The mixing will be mechanized, large castings will be knocked out automatically; hydraulic and shot-blast chambers will be used for cleaning castings, and a new electrolytic cleaning method will come into use. It is estimated that the Uralmashzavod will raise the output of steel castings to 90 tons per man from the present 58 tons annually, cut costs by 23%. "Jacket molding" used at the Elektrostal' works and experiments with a mechanical molding casing at the NKMZ gave a proof that large castings can be produced 2 to 2.5 times faster comparing with 10-30 days with manual molding when molds are joined from standardized sections made from quick-drying mixtures in molding machines. The first mechanical line for the preparation of large mold boxes (up to 3x2.5x1 m), designed by VPTI, is working at the Elektrostal' works since 1959. It is a merry-go-round installation with 6 carriages bearing "coordinate plates" with automatic fixing of patterns, preparing 32 molding box halves per hour. TsNIITMASH has developed a 2-position molding machine with pressing membranes for making shell molds from mixtures with water glass. The foreign molding method with the use of wet bentonite mixes will be used, as it eliminates

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Heavy Machine Building Development in the Seven-Year Plan

the drying and facing of molds. Centrifugal and die casting will be used for a wider range of castings than before, and it is planned to develop equipment and technology for centrifugal casting of steel and cast iron blanks weighing up to 50 tons. It is mentioned that electroslag welding will be used extensively for joining portions of heavy forgings, and presently the method is used in production of turbine shafts (previously one-piece 190-ton forgings had to be produced). Of the existing machine tools 30-40 % must be replaced by new equipment, and 20-30 % must be modernized; machining methods are to be improved. There are 4 figures. ✓

Card 6/6

KULAGIN, Ivan Dmitriyevich, kand.tekhn.nauk; SHASHKOV, Andrey Nikola-
yevich, kand.tekhn.nauk; UMYAGIN, Mikhail Grigor'yevich

Specialists answer questions about welding. Tekh. mol. 28
no. 12:7-10 '60. (MIRA 13:12)

1. Institut metallurgii imeni A.A.Baykova AN SSSR. (for Kulagin).
2. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta
avtogenny obrabotki metallov (for Shashkov). 3. Direktor
Vsesoyuznogo proyektno-tekhnologicheskogo instituta tyazhelogo
mashinostroyeniya (for Umyagin).
(Welding)

S/122/61/000/010/002/011
D221/D304

AUTHORS: Vinogradov, K.K., Chief of Department, and Umyagin,
M.G., Director

TITLE: Complex mechanization and automation in heavy
engineering

PERIODICAL: Vestnik mashinostroyeniya, no. 10, 1961, 9 - 16

TEXT: The author state that the Soviet-engineering industry has mastered technological methods of manufacturing individual components. Great importance is attached to slag welding, and the use of unit and special purpose machine tools as well as broaching. Special stands equipped with milling, boring and planing heads for single piece production are designed by machine tool makers, with work organized around the component. The Uralmashzavod organizes production so as to have 50 % of the components made up of standardized parts, 40 % of general designation components, and only 10 % of special items. Casting is to be organized in new and reconstructed shops on the basis of flow lines envisaged by the steel

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Complex mechanization and ...

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D221/D304

castings department of the Uralmashzavod or Elektrostal'skiy Plant of Heavy Engineering. Castings are grouped according to size and weight which are handled by specialized sections ensuring complex automation of basic and auxiliary operations. Pattern and moulding box manufacture is normalized. Each group has a single coordinate moulding plate and moulding box size which permits the process to be automated. The planned output of one operator on a line of castings with maximum weight of up to 5000 kg increased 3-4 times as compared to the present production of castings on forming machines with a capacity of 5 tons, whereas on lines with lighter castings this rise may reach 6 times. Large castings are to be made in mechanized caissons, reinforced concrete caissons are foreseen in the case of very large moulds, with application of overhang sand-thro-wers having a capacity of 40-50 m³/hour. Cores are made in blocks 1 m long and wide. These lines are composed of a rotary installation of six trolleys, on which coordinates plates with automatic clamping of patterns are mounted. Output of line is 32 half forms by shift, with maximum size of mould 3 x 2.5 x 1 m. Sand-jet forming increases the work efficiency by 1.5 - 2.5 times. Handling is

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Complex mechanization and ...

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D221/D304

automated. The complex automation of foundry includes the problem of an electronic computer for cupola charge and control of melting process. Design and modernization of foundry machines is also important. In the field of forging, VPTI has developed a project of complex mechanization. Thermal treatment is to be automated with furnace doors operated from the control panel of charger or loading crane. The level of mechanization is planned to be raised from 50 to 75 %, and that of handling from 60 to 99 %. Work efficiency of an operator will increase by 1.5 times, output per square meter of shop floor will be stepped up by 2.5 times, with a simultaneous reduction of average specific labour by 2.5 times. The introduction of flow lines in manufacturing head and main beams for electric travelling cranes should be mentioned. The use of special stands for machining large components at Uralmashzavod is of great importance. The authors consider that the main problem of engineering is the reduction of volume of machining by rational approximation of dimensions and surface finish of blanks. The stability of machining processes and typicalization as well as standardization of components are also decisive in automation. Increased use of

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Complex mechanization and ...

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D221/D304

computers for work preparation is called for. Mechanization of auxiliary operations, which utilizes now about half of the operators in USSR is considered as urgent. There are 5 figures.

ASSOCIATION: Otdel ekonomiki i razvitiya tyazhelogo mashinostroyeniya Gosekonomsoвета SSSR (Department of Economics for the Development of Heavy Machine Construction of the Gosekonomsovet, USSR); VPTI tyazhelogo mashinostroyeniya (VPTI of Heavy Machine Construction)

Card 4/4

SPASSKAYA, O.V., inzh.; UMNYAGIN, M.G., inzh.

Determining the degree of mechanization and automation of production
processes in the machinery industry. Mekh. i avtom.proizv. 15
no.12:41-47 D '61. (MIRA 14:12)
(Machinery industry) (Automation)

UMNYAGIN, M. G.

Determining the degree of mechanization and automation of
production processes in the machinery industry. Vest.
mashinostr. 42 no.12:68-74 D '62. (MIRA 16:1)

1. Direktor Vsesoyuznogo proyektno-tekhnologicheskogo instituta
tyazhelego mashinostroyeniya.

(Industrial management)

UMNYAGIN, M.G., inzh.; KAGAN, N.Ya., inzh.

Means for over-all mechanization of founding processes at heavy machinery
plants. Vest.mashinostr. 43 no.4:43-50 Ap '63. (MIRA 16:4)
(Founding—Technological innovations)

UMNYAGIN, M.O., inzh.

Present state and prospects for the development of overall
mechanization of welding in the heavy machinery industry.
Svar. proizv. no.2:18-23 F '65. (MIRA 18:3)

1. Vsesoyuznyy proyektno-tekhnologicheskij institut tyazhelego
mashinostroyeniya.

UMNYAGIN, M.G.

Basic trends in the over-all mechanization of the metallurgical machinery industry. Mekh.i avtom.proizv. 18 no.3:5-11 Mr '64.
(MIRA 17:4)

1. Direktor Vsesoyuznogo proyektno-tehnologicheskogo instituta tyazhelogo mashinostroyeniya.

UMNYAGIN, M.G., inzh.; KHARAKER, G.M., inzh.

Some problems in the development of technological processes in the
manufacture of heavy machinery in the countries of the Council
of Mutual Economic Assistance. Vest.mashinostr. 44 no.1:54-59
Ja '64. (MIRA 17:4)

GRIGOR'YEV, N.G., inzh.; UMNİYAGIN, M.G., inzh.; KHARAKER, G.M., inzh.

Development of technology in the metallurgical machinery industry.
Vest. mashinostr. 44 no.9:79-83 S '64.

(MIPA 17:11)

1. UMNİYAGIN, M. Ye., ed.
2. USSR (600)
4. Technology
7. Mechanized knockout, scouring, and cleaning of steel and cast iron castings, Moskva, Mashgiz, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Unclassified.

UMNYAGINA, M.G.

UMNYAGINA, M.G., laureat Stalinskoy premii, inzhener, redaktor; TIKHONOV, A.Ya. tekhnicheskii redaktor.

[General Stakhanovite technology in the mechanical processing of large machine parts; work practice of the Novo-Kramatorsk Stalin Machine-Building Factory in Elektrostal] Kompleksnaya stakhanovskaya tekhnologiya mekhanicheskoi obrabotki krupnykh detalei; iz opyta raboty Novo-Kramatorskogo mashinostroitel'nogo zavoda imeni Stalina, g.Elektrostal'. Pod red. M.G.Umniagina. Moskva, Gos.nauchno-tekhnicheskoe izd-vo mashinostroitel'ny, 1953.26 p. (Microfilm) (MLRA 9:5)

1.Moscow. Gosudarstvennyy soyuznyy institut Orgtyashmash.
(Elektrostal--Machinery--Construction)

UMNYAKOV, I.; ALESKEROV, Yu.; KOCHEROV, V., red.; BAKHTIYAROV, A.,
tekh. red.

[Samarkand; manual and guidebook] Samarkand; spravochnik-
putevoditel'. 3., dop. i ispr. izd. Tashkent, Gos.izd-vo
UzSSR, 1962. 159 p. (MIRA 16:5)
(Samarkand--Guidebooks)

UMNYAKOV, I.I.; ALESKEROV, Yu.N.; MIKHAYLOV, K.M.

[Samarkand; a guidebook] Samarkand; kiskacha spravochnik.
Tuzuvchilar: I.I.Umniakov, IU.N.Aleskerov i K.M.Mikhailov.
Toshkent, Uzbekiston SSR davlat nashrieti, 1958. 106 p.
[In Uzbek]. (MIRA 11:12)
(Samarkand--Description--Guidebooks)

UMNYAKOV, I.I.; ALESKEROV, Yu.N.; KOVYNEV, N., red.; BAKHTIYAROV, A.,
tekh.red.

[Samarkand; concise reference book] Samarkand; kratkii spravochnik. Izd.2., dop. i ispr. Tashkent, Gos.izd-vo Uzbekskoi SSR, 1958. 158 p. (MIRA 14:2)
(Samarkand--Guide books)

UMNYAKOV, P., kand.tekhn.nauk

Studies of laminated vibrated brick slabs. Sel'. stroi. 16 no.12:
17 D '61. (MIRA 15:2)

(Brick walls)

UMNYAKOV, P. N., Cand Tech Sci (diss) -- "The use of reflective thermal insulation in the wall structures of buildings". Moscow, 1959. 16 pp (Acad Construction and Architecture USSR, All-Union Sci Res Inst of New Building Materials), 150 copies (KL, No 12, 1960, 128)

UMNYAKOV, P.N., inzh.

Using reflecting heat insulation in building walls. Nov.tekh.mont.i
spets.rab.v stroi. 21 no.5:22-25 My '59. (MIRA 12:7)

1. Nauchno-issledovatel'skiy institut stroitel'noy fiziki Akademii
stroitel'stva i arkhitektury SSSR.
(Insulation (Heat)) (Walls)

UMNYAKOV, P.N., inzh.

Study of heat engineering properties of some types of vibrated
brick slabs. Trudy NIISF no.1:72-79 '62. (MIRA 15:11)
(Brick walls--Thermal properties)

UMNYAKOV, P., kand.tekhn.nauk

Economical keramzit concrete slabs. Sel'. stroi. no.7:4-5 '62.
(MIRA 15:8)

(Walls) (Lightweight concrete)

SPIVAK, N.Ya., kand. tekhn. nauk; USHKOV, F.V., kand. tekhn. nauk;
UMNYAKOV, F.M., kand. tekhn. nauk; TACHKOVA, M.A., inzh.

Heat conductivity of keramzit concrete. Bet. 1 zhel.-bet. 9
no.3:137-140 Mr '63. (MIRA 16:4)

(Keramzit)
(Lightweight concrete--Thermal properties)

UMNYAKOV, P.N., kand. tekhn. nauk

Heat conductivity of "arbolite" in enclosing structures.
Stroi. mat. 9 no.6:36-37 Je '63. (MIRA 17:8)

MOROZOV, N.V., doktor tekhn. nauk; GIMBYAKOV, F.N., kand. tekhn. nauk

Thermophysical characteristics of verlite-concrete enclosing
elements of large-panel buildings. Stroit. mat. 11 no.2:20-22
F '65. (MIRA 18:3)

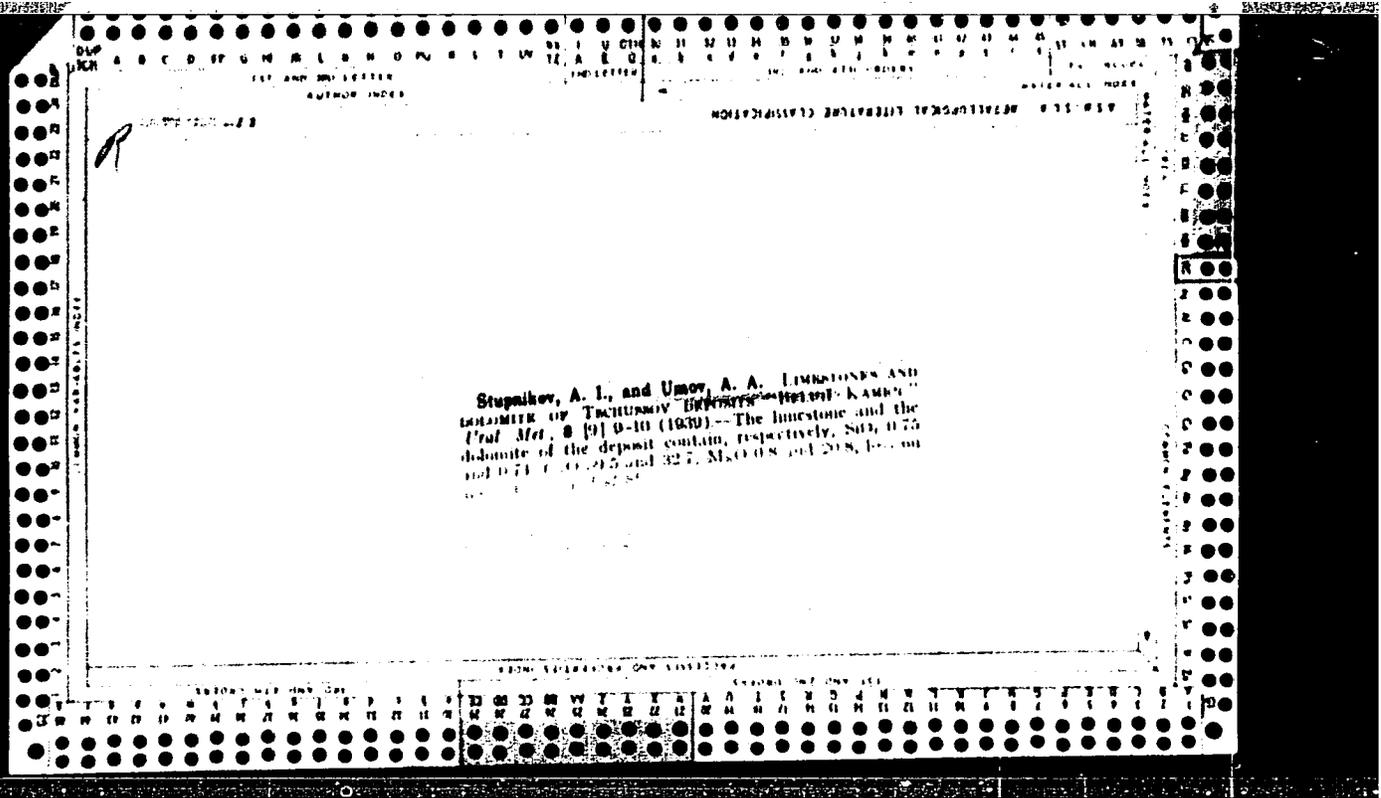
KROBENINOV, V.; LEKSHIN, V.

work of the Council of Young Specialists in our plant.
Mashinostreitel' no. 2:42 F '61. (MIL 14:2)
(Izhevsk--Machinery industry)

DOMNITSKIY, V.F., inzhener: UMNYKH, V.F.

Automatic loading of drier cars. Der. prom. 5 no.10:21 (MLBA 9:11)
0 '56.

1. Ussuriyskiy lesozavod no.1-2 Minlesproma SSSR.
(Lumber--Drying)



PROCESSES AND PROPERTIES

LIST AND INDEX

Ca

Limestones and dolomite of Tachusov deposits "Beluzhskaya" A. I. Stupnikov and A. A. Umov. *Izv. Akad. Nauk SSSR, Ser. Khim. Nauk*, No. 9, 9-10 (1939); *Chem. Zvest.* 1940, 1, 324.

The limestone and the dolomite of the deposit contain, resp., SiO_2 0.76 and 0.74, CaO 50.5 and 32.7, MgO 0.8 and 20.8, loss on ignition 43.5 and 45.8%. M. V. Condoide

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

TECHNICAL LITERATURE

1939-1940

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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УМОВ, Алексей Алексеевич

(An aid for brigades of bricklayers of metallurgical plants) Sverdlovsk, Gos.
nauch.-tekhn. izd-vo lit-ry pochernoj i tsvetnoj metallurgii, 1944. 151 p.

(50-47277)

TN677. U483

UMOV, Aleksey Alekseyevich; PAVLOV, M.A., nauchnyy redaktor.

[Gas fitter's instructions for the Cowper stove] Pomoshchnik
gazovshchika u kaupera. Pod nauchnoi red. M.A.Pavlova. Sverdlovsk,
Gos. nauch.-tekh. izd-vo lit-ry po chernoii i tsvetnoi metallurgii,
1947. 423 p. (MIRA 8:1)
(Gas--Heating and cooking)

UMCV, H. A.

CIA

Subject: [illegible]
 Reference: [illegible]
 Date: [illegible]
 Location: [illegible]
 Status: [illegible]
 Classification: [illegible]

UMOV, N.

Izbrannye Sochinenia - Matematika, Mekhanika, Fizika, Astronomiia (Selected Works - Mathematics, Mechanics, Physics, Astronomy)

553 p. 2.25

SO: Four Continent Book List, April 1954.

УМОВ, Н. А.

Author: Умов, Н. А. 1846-1915

Title: Selected ²Compositions. Ed. by A. I. Prudvichitelev.
553 pp., ports., diagrs., bibliography

Date: 1950. Moscow

Subject: Physics.--Collected works.

Available: Library of Congress, Call No: LCJ.U5

Source: Lib. of Cong. Subj. Cat., 1951

UMOV, Nikolai Alekseevich; USAGIN, Ivan Filippovich

Physicists

Ivan Filippovich Usagin (1835-1919) and Nikolai Alekseevich Umov (1846-1915) in the history of technology in our country. Sov. sviaz. No. 3, 1951.

Monthly List of Russian Accessions, Library of Congress, March 1952. UNCLASSIFIED.

UMOV, S.S., kand.sel'skokhoz.nauk

Chick-pea in the southern cis-Ural region. Zemledelie 8 no.11:39-
41 N '60. (MIRA 13:10)

1. Bashkirskiy nauchno-issledovatel'skiy institut sel'skogo khoz-
yaystva.
(Ural Mountain region--Chick-pea)

UMOY, Ye.; STRIMBAN, Yu.

Improve the management of grain procurement stations, Muk. elev. prov.
23 no.12:13-14 D '57.
(MIRA 11:2)

1. Sverdlovskoye oblastnoye upravleniye khleboproduktov.
(Grain elevators)

UMOV, Ye.; KADLUBIK, I.

Organizing the production of break flower in the SOB-MK grain
drying and cleaning towers of grain receiving stations. Muk.-
elev. prom. 27 no.8:20-22 Ag '61. (MIRA 14:7)

1. Sverdlovskoye upravleniye zagotovok.
(Grain milling)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, 15-57-5-6184
p 70 (USSR)

AUTHOR: Umova, L. A.

TITLE: A Rarely Observed Granular Structure of an Oolitic Limestone (Redko nablyudayemaya zernistaya tekstura oolitovogo izvestnyaka)

PERIODICAL: Tr. Gorno-geol. in-ta, Ural'sk. fil. AN SSSR, 1955, Vol 26, pp 241-242.

ABSTRACT: Oolitic limestones with granular structure have been discovered in the lower part of the Triassic-Jurassic productive coal beds on the eastern slope of the Urais. Carbonate oolites with a diameter of 0.8 mm to 2 mm are bordered by spherulitic rims up to 0.4 mm thick. The seams between individual grains are covered by a thin film of iron hydroxides.

Card 1/1

O. I. Z.

Translation from: Referativnyy zhurnal, Geologiya, 15-1957-3-2628
p 12 (USSR) 1957, Nr 3,

AUTHORS: Papulov, G. N., Umova, L. A.

TITLE: Cretaceous and Paleogene Rocks Along the Right Bank of
the Iset' River in the Shadrinskiy Rayon (Melovyye
i paleogenovyye otlozheniya pravoberezh'ya r. Iseti v
predelakh Shadrinskogo rayona)

PERIODICAL: Tr. Gorno-geol. in-ta, Ural'skiy fil. AN SSSR, 1956,
vol 24, pp 178-186

ABSTRACT: The stratigraphic subdivision of the Upper Cretaceous
and Paleogene marine deposits of the region has been
made from data obtained from three holes drilled near
Shadrinsk in 1949-1950. All the drill-holes passed
through Paleogene and Upper Cretaceous rocks. Contin-
ental beds, apparently Lower Cretaceous, were encoun-
tered in two holes. The Paleozoic substratum (argil-
laceous-chloritic metamorphosed shales at a depth of
330.5 m) was uncovered only in drill-hole No. 1.

Card 1/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset' River in the Shadrinskiy Rayon 15-1957-3-2628

Detailed descriptions are given of the stratigraphy of the Cretaceous and Tertiary rocks, their mineralogical peculiarities, and their fossil content. The age of the rocks has been determined by comparing the fossils with those of neighboring regions (see Table).

System	Group and Series	Thick-ness, m	Lithology	Guide fossils
	Quaternary	up to 16	Brown sandy clays, sands, clays	
↑	Oligo-cene	up to 34	Clays, beidellitic, olive green and laminated, silty in lower part	

Card 2/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset' River in the Shadrinskiy Rayon 15-1957-3-2628

PALEOGENE

Eocene	up to 47	Diatomite, light gray	Diatoms: <u>Melosira sulcata</u> Grun., <u>Stephanopyxis grunowi</u> Gr. and St., <u>S. turris</u> var. <u>intermedia</u> Grun., <u>Goscinodiscus</u> [<u>Goscinodiscus</u>] <u>moelleri</u> Grun., <u>C. argus</u> Ehr., and others. Siliceous flagellates: <u>Dictyocha quadrata</u> Hanna, <u>D. navicula</u> var. <u>biapiculata</u> Lemm., and others.
	up to 62	Opaline muds, gray and dark gray, argillaceous in upper part. siltstones, sands and sandstones, quartzose, argillaceous, local opaline cement	

Card 3/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset' River in the Shadrinskiy Rayon 15-1957-3-2628

	Paleocene	up to 42	Mudstones, beidelitic, gray and dark gray	Foraminifers: <u>Globigerinella voluta</u> White, <u>Globigerina bulloides</u> d'Orb., <u>G. pseudobulloides</u> Plumm., <u>G. triloculinoides</u> Plumm., <u>Glo-mospira choroides</u> (Park and Jon.), <u>Trochammina</u> sp. Diatoms: <u>Stephanopyxis turris</u> var. <u>cylindrus</u> Grun., <u>Trinacria regina</u> var. <u>obtusa</u> As.
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Card 4/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset River in the Shadrinskiy Rayon 15-1957-3-2628

↑	Danian	up to 8	Marls, light gray, with layers of siderite	Foraminifers; <u>Clavulina parisiensis</u> d'Orb., <u>Anomalina acuta</u> Plum., <u>Stenoloina caucasica</u> (Subb.).
	Maestrichtian-Camparian	25-90	Marls, light gray, silty, with rare layers of siderite	Foraminifers; <u>Bolivina decurrens</u> Ehr., <u>B. incrassata</u> Reuss, <u>Bolivinoidea decoratus</u> Jones, <u>Orbignina sacheri</u> Reuss, <u>Cibicides gankinoensis</u> Nezk., <u>Nonionella kalinina</u> Balach, <u>Gaudryina</u> , <u>stephenioni</u> Cushm.

Card 5/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset' River in the Shadrinskiy Rayon' 15-1957-3-2628

CRETACEOUS

Santonian	24-44	Sandstones with layers of sand, Mudstones, montmorillonitic-beidellitic, greenish gray. Opaline muds, gray and dark gray, locally silty	Foraminifers: <u>Spiroplectammina kelleri</u> Dain., <u>Haplophragmoides glamerati-formis</u> Zasp., <u>H. champani</u> Moroz., <u>Reaphax</u> ex gr. <u>gut-tifer</u> Brady.
Turonian	38-40	Mudstones, hydromica-ceous-beidellitic, greenish-gray, sandstones with cobbles and phosphatic concretions in lower part	Foraminifers: <u>Gaudrypa filiformis</u> Bert., <u>Ammabaculites</u> ex gr. <u>agglutinans</u> d'Orb., <u>Haplophragmoides</u> aff. <u>nonionoides</u> (Reuss), <u>Reaphax</u> sp.

Card 6/7

Cretaceous and Paleogene Rocks Along the Right Bank of the Iset' River in the Shadrinskiy Rayon . 15-1957-3-2628

↓	Genomanian-Albian?	up to 28	Siltstones, feldspathic-quartzose, argillaceous with layers of siderite	
	Lower Cretaceous	up to 23	Clays, kaolinitic, variegated, with plant remains	
	Paleozoic		Metamorphosed shales	

Card 7/7

V. A. L.

UMOVA, L.A.

Lithology and facies of Maastricht sediments in eastern slopes of
the Central Urals. Trudy Gor.-geol. inst. no. 28:89-96 '57.

(Ural Mountains--Geology, Stratigraphic)

(MIRA 11:10)

UHOVA, L. A.

519)

PLANNING BOOK EXHIBITION NOV/2003

UHOVA, L. A. *Geological prospecting in the USSR. The USSR geological-geographic prospecting.*

Geology of goldfields in the USSR. USSR Geology, 1976, 6 (Materials on the 20th Anniversary of the USSR, Pt. 6) Moscow, Geolizdat, 1976, 120 p. USSR All-Union, 1,000 copies printed.

Geological prospecting in the USSR. USSR Geology, 1976, 6.

UHOVA, L. A. *Geological prospecting in the USSR. USSR Geology, 1976, 6 (Materials on the 20th Anniversary of the USSR, Pt. 6) Moscow, Geolizdat, 1976, 120 p. USSR All-Union, 1,000 copies printed.*

UHOVA, L. A. PROSPECTING. This book is intended for geologists and economists interested in the mineral resources of the USSR.

UHOVA, L. A. PROSPECTING. This book is intended for geologists and economists interested in the mineral resources of the USSR.

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

UHOVA, L. A. *Structure of the Paleozoic basins of the USSR. Part 2/3* 91

2

UHOVA, L.A.

Glauconite-leptochlorite rocks in the Northern Sos'va Valley.
Trudy Gor.-geol. inst. UFGN SSSR no. 42:203-210 '59.

(SIRA 14:2)

(Northern Sos'va Valley--Glauconite)

(Northern Sos'va Valley--Leptochlorite)

UMOVA, L.A.

Lithology and facies of Cretaceous and Paleogene sediments of the eastern slope of the Central Urals and minerals associated with them. Trudy SNIIGIMS no.1:55-59 '59. (MIRA 15:4)
(Ural Mountains--Sediments (Geology))

PROCESSES AND PROPERTIES INDEX

B-I-5

BC

Reaction of aluminum with iron sulphide in presence of carbon. A. B. MIKULITSKI and M. A. USOVA (Zhurnal, 1964, 9, No. 10, 24-25).—The reaction $Al_2O_3 + 2FeS \rightarrow Al_2S_3 + 2Fe + SO_2$ proceeds to the right at $>1200^\circ$. As a result, Al_2O_3 in blast-furnace slags should help in decarburizing the pig Fe. Ct. Ans. (c)

METALLURGICAL LITERATURE CLASSIFICATION

LITERATURE	185000 1810 014 021	LITERATURE	181101 014 014 111
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

CA

4

Electrothermal production of aluminum and its alloys.
 A. S. Mikulinski and M. A. Unova. *Tsvetnye Met.*
 1940, No. 5 0, 129-34. A review on electrothermal extrn.
 of Al is followed by a description of new expts. made for
 the purpose of obtaining melts of Al carbide and alloys of
 Al with Si and with Cu. Heats were made in an elec-
 arc furnace at 35-7 v. and 450-500 amp. (1) Al_2O_3 was
 melted with carbon; the melts analyzed 24 to 25%
 Al_2C_3 and 30 to 35% Al, remainder slag. About 30% of
 the Al went into the melt, 35% to slag, and the remainder
 was volatilized. With increase of excess C the losses in
 Al_2O_3 increased. Higher temps. increased the metallic
 Al in the melt to 70%. (2) Melts were made with addn.

of NaCl in the amts. of 5 to 25% of the wt. of the Al_2O_3 .
 Analyses of the melt showed 40-50% Al and 35 to 50% Al
 carbide. The disadvantage of this method is the large
 amt. of slag and sepn. into layers. Al obtained with the
 addn. of NaCl contained 0.034 to 0.04% Na. (3) Melts
 made with addn. of SiO_2 and charcoal resulted in a product
 contg. 60 to 78% Al, 1 to 4% Al_2C_3 , and 10 to 18% Si.
 Large amounts of slag were formed when SiO_2 was used.
 (4) With addn. of Cu the amount of slag was less, 27-38%
 of the total Al of the charge was found in the melt, and the
 melt analyzed 50-70% Al, 8-14% Al_2C_3 and 10-10%
 Cu. Al can be extd. from carbide melts by remelting at
 700 to 800° and holding it for 3-4 hrs. at that tempera-
 ture. 28 references. H. N. Daniloff

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

UMOVA, M.A.; LORIYE, Yu.I.; BYUR, L.S.; POLYANSKAYA, A.M.

Simultaneous sensitization to some erythrocyte antigens. Probl.
gemat.i perel.krovi no.11:56-58 '61. (MIRA 15:1)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i pereli-
vaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.
Bagdasarov [deceased]) Ministerstva zdravookhraneniya SSSR.
(RH FACTOR) (ERYTHROCYTES) (ANTIGENS AND ANTIBODIES)

UMOVA, M.A., kand. tekhn. nauk, dots.; LOSHKAREV, A.G., dots.,
otv. red.

[Heterogeneous equilibrium; lectures for correspondence
students] Geterogennoe ravnovesie; lektsii dlia studentov-
zaochnikov. Sverdlovsk, Izd. Sverdlovskogo gornogo in-ta,
1964. 58 p. (MIRA 17:11)

1. Zaveduyushchiy kafedroy khimii Sverdlovskogo gornogo
instituta imeni V.V.Vakhrusheva (for Loshkarev).

BEGUNOVA, I.I., red.; BRUSILOVSKIY, Ye.S., dots., red.; DASHIYANTS,
G.A., prof., red.; POLISHCHUK, I.A., prof., red.; UMOVIST, M.H.,
dots., red.; FEDOROV, I.I., prof., red. ~~DASHTAYANTS, G.A., red.;~~
~~BRUSILOVSKIY, Ye.S., red.~~

[Allergy problems in clinical practice] Voprosy allergii v
klinike. Kiev, osmedizdat USSR, 1963. 221 p.

(MIRA 18:9)

1. Kiyevskiy Gosudarstvennyy institut usovershenstvovaniya vra-
chey. 2. Glavnyy vrach Gorodskoy klinicheskoy bol'nitsy Shev-
chenskogo rayona goroda Kiyeva (for Begunova). 3. Kiyevskiy
Gosudarstvennyy institut usovershenstvovaniya vrachey (for
Polishchuk, Umovist).

UMOVIST, M.H., kandidat meditsinskikh nauk

Blood supply of the upper third of the esophagus during mobilization.
Vrach.delo no.2:159-162 F '56. (MLRA 9:7)

1. Kafedra operativnoy khirurgii i topograficheskoy anatomii
(zaveduyushchiy professor S.T.Vovitskiy) Kiyevskogo meditsinskogo
instituta.

(ESOPHAGUS--BLOOD SUPPLY)

GUBANOV, Aleksey Gavrilovich; UNOVIST, M.N., red.; POTOTSKAYA, L.A.,
tekh. red.

[Partial pulmonary resections in tuberculosis; anatomical and
experimental materials] Chastichnye rezektsii legkikh pri tu-
berkuleze; anatomicheskie i eksperimental'nye materialy. Kiev,
Gosmedizdat USSR, 1961. 303 p. (MIRA 15:7)
(TUBERCULOSIS) (LUNGS—SURGERY)

UMPIROVICH, N.V.; GEL'MAN, G.T.

Tumor of the hypophysis in combination with thyrotoxicosis. Zdrav.
Bel. 7 no. 4:72-73 Ap '61. (MIRA 14:4)

1. Iz Belorusskogo protivozobnogo dispansera (glavnyy vrach -
dotsent N.M. Draznin).
(PITUITARY BODY—TUMORS) (THYROID GLAND—DISEASES)

UMPEROVICH, N.V.

14(5)

PHASE I BOOK EXPLOITATION

SOV/2820

- Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki Razvedochnaya i promyslovaya geofizika, vyp. 26 (Exploration and Industrial Geophysics, Nr 26) Moscow, Gostoptekhizdat, 1958. 87 p. (Series: Obmen proizvodstvennym opytom) 4,000 copies printed.

Ed.: M.K. Polshkov; Exec. Ed.: Ye.G. Pershina; Tech. Ed.: A.S. Polosina.

PURPOSE: This booklet is intended for exploration geophysicists and geologists.

COVERAGE: This collection of articles includes discussions of improvements in seismic exploration techniques and interpretations of data obtained by the refracted and reflected waves method of seismic exploration. Individual articles discuss: the construction of gravimetric maps, improvements in industrial borehole equipment, the standardization of radioactive electro-logging equipment, and methods for computing labor productivity in geophysical operations. A nomogram to facilitate the interpretation of data and conditions when using gamma logging of boreholes is described. References accompany each article.

Card 1/3

Exploration and Industrial Geophysics (Cont.)

SOV/2820

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Exploration and Industrial Geophysics (Cont.)	SOV/2820
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AVAILABLE: Library of Congress	

Card 3/3

MM/mg
12-31-59

TUMZOV, I.K.; USPIROVICH, I.V.

Studying the surface of the Pre-Jurassic basement of the
West Siberian Plain by the method of reflected waves.

Trudy SNIIGGMS no. 30:75-81 ' 64 (SERIA 10:1)

UMPEROVICH, N.V.; TUYEZOV, I.K.; PASHUTINA, S.R.

New data on the multiple reflection of waves in the West Siberian
Plain. Geol. i geofiz. no.9:81-02 '64. (MIRA 18:7)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i
mineral'nogo syr'ya, Novosibirsk.

UMPEROVICH, N.V.

Determining the types of multiple reflected waves in the Ob'-
Irtysh interfluvium of the West Siberian Plain on the basis of
kinematic analysis. Geol. i geofiz. no.8:77-86 '65.

(MIFA 18:9)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,
geofiziki i mineral'nogo syr'ya Novosibirsk.

UMRATH, KARL,
HANS V. BRÜCKE, Ophthalmologica 117, 19-35 (1949)

ea

117

Blocking of the transmission of stimuli from secondary sensory cells to the sensory nerves and lowering of the sensitivity of the cornea by atropine. Karl Umrath and Herbert Müsachler (Univ. Graz, Austria). *Z. Vitamin-, Hormon- u. Fermentforsch.* 4, 182-90 (1951) (in German); cf. Hellauer. *Z. vergleich. Physiol.* 32, 383 (1950). Atropine blocks the stimuli transmitted by acetylcholine. The high sensitivity of the cornea in man and in some animals (e.g. rabbits) as a result of its high acetylcholine content is lowered to the level of the sensitivity in animals with a low corneal content of acetylcholine (e.g. dogs, cats). Erich Hirschberg

UMREYKO, D.S.

Symmetry and structure of electron absorption spectra of uranyl
compounds. Zhur. prikl. spektr. 2 no.5:465-467 My '65. (MIRA 18:7)

SOV/81-59-16-56084

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 12 (USSR)

AUTHORS: Sevchenko, A.N., Umreyko, D.S.

TITLE: Luminescence Spectra of Crystalline Uranyl Phosphate Salts

PERIODICAL: Uch. zap. Belorussk. un-t, 1958, Nr 41, pp 27-39

ABSTRACT: The luminescence spectra of the uranyl salts of the ortho- and pyrophosphoric acids at room temperature and -180°C are investigated. In the luminescence spectra of uranyl phosphates at 20°C the frequency difference between adjacent bands, which corresponds to the frequency of the full-symmetric oscillation of UO_2^{2+} in the ground state, is equal to $\sim 810\text{ cm}^{-1}$ which is 50 cm^{-1} less than in uranyl sulfates, uranyl nitrates, etc. The increase in the number of molecules of crystallization water leads also to the lowering of the frequency of oscillation of UO_2^{2+} (796 cm^{-1} in $2\text{NaUO}_2\text{PO}_4 \cdot 6\text{H}_2\text{O}$ as compared with 814 cm^{-1} in $2\text{NaUO}_2\text{PO}_4 \cdot 3\text{H}_2\text{O}$). The lowering of the temperature to -180°C leads to the resolution of the fine structure of the luminescence spectra caused by the combination of the electron transition with full-symmetric, anti-symmetric and defective oscillations of UO_2^{2+} and also with oscillations of the crystalline lattice,

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Luminescence Spectra of Crystalline Uranyl Phosphate Salts

SOV/81-59-16-56084

as has been shown by Sevchenko and Stepanov (Zh. eks., teor. fiz). The intensity of the luminescence and the mean duration of the excited state of the uranyl phosphate decrease with the substitution of PO_4^{3-} by $\text{P}_2\text{O}_7^{4-}$.

V. Yermolayev.

Card 2/2

VOLOD'KO, L.V.; UMREYKOV, D.S.

Multipurpose double-disc phosphoroscope. Inzh.-fiz.zhur. no.8:
120-124 Ag '60. (MIRA 13:8)

1. Belorusskiy gosudarstvennyy universitet im. V.I.Lenina,
g. Minsk.

(Luminescence)

Umreyko, D.S.

S/170/60/003/008/014/014
B019/B054

AUTHORS: Volod'ko, L. V., Umreyko, D. S.

TITLE: A Universal Double-disk Phosphoroscope 71

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 8,
pp. 120 - 124

TEXT: The authors report on a Becquerel phosphoroscope which was developed at the authors' laboratory and does practically not limit the dimensions of the chamber of the samples investigated. Thus, it is possible to use a thermostatic cell and to change the angle between the exciting light flux and the direction of observation within a wide range. The instrument can easily be equipped with optical standard devices (monochromator, spectrograph, etc.). The construction of the instrument is thoroughly described with the aid of Fig. 1. In a short theoretical investigation it is shown that oscillations of the intensity of the exciting radiation and changes in the number of revolutions of the motor during the experiment exert a strong influence on the intensity of luminescence which is recorded by measurements. Proceeding from

Card 1/2

✓B

A Universal Double-disk Phosphoroscope

S/170/60/003/C08/014/014
B019/B054

formula (3) for the damping of luminescence after excitation is stopped, formula (5) is derived for the energy absorbed by the receiver. Further, the authors discuss the influence of the changes in observational conditions exercised on the accuracy of measurements. S. I. Vavilov (Ref. 7) is mentioned. There are 1 figure and 7 references: 4 Soviet, 2 French, and 1 German. VB

ASSOCIATION: Beloruskiy gosudarstvennyy universitet im. V. I. Lenina
g. Minsk (Belorussian State University imeni V. I. Lenin,
Minsk)

SUBMITTED: November 14, 1959

Card 2/2

85232

S/048/60/024/006/025/030/XX
B013/B067

24.3500

AUTHORS: Volod'ko, L. V., Sevchenko, A. N., and Umreyko, D. S.

TITLE: The Agreement Between the Absorption and Luminescence Spectra of the Solutions of Uranyl Compounds

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 6, pp. 749-751

TEXT: At room temperature, the luminescence and absorption spectra of uranyl solutions show no mirror symmetry although V. L. Levshin (Ref. 1) observed the presence of a certain mirror symmetry in 1937. The observance of the conditions necessary for producing absorption and emission spectra with mirror symmetry offers the possibility of explaining the degree of deviation of the spectra of uranyl solutions from mirror symmetry and the reasons of this deviation. Absorption and luminescence spectra of 0.1 M uranyl sulfate solution at room temperature were calculated. The frequency of the pure electron transition was determined by comparing the luminescence spectra of the above-mentioned solution with the spectrum of crystalline uranyl sulfate at -185°C and -269°C. The frequency of pure electron

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Luminescence Spectra of the Solutions of
Uranyl Compounds

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transition in the solution is shifted by 50 cm^{-1} toward short waves, and amounts to about $20,380 \text{ cm}^{-1}$. The frequency of perfectly symmetrical stretching vibrations of the uranyl ion amounts to $\sim 700 \text{ cm}^{-1}$ in the excited electron state and to $\sim 850 \text{ cm}^{-1}$ in the non-excited state. Fig. 1 shows that the absorption spectrum of an aqueous uranyl sulfate solution is much more complex than the calculated absorption spectrum which is quasisymmetrical with respect to the spectrum of fluorescence. The disagreement between the experimental and the calculated absorption spectrum may be caused by the presence of several excited electron states. On the basis of studies of the Zeeman effect and of the measurements of polarization of spectral lines of a large number of crystalline uranyl salts, Dieke and Duncan (Ref. 6) divided the lines which they had studied into four series. The different behavior of these lines in a magnetic field and their different polarization prove that these groups of lines are caused by the transitions of the uranyl ion into different electron states (Fig. 2). By applying mirror symmetry, one of the electron states mentioned by Dieke and Duncan could be observed in uranyl compounds, i.e., the

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"series of fluorescence". The integral absorption of the quasisymmetrical ("fluorescence") electron state is about 10% of the total absorption of the visible region of the spectrum. Consequently, the main absorption of uranyl salt solutions in this region takes place at room temperature as a result of $\Sigma \rightarrow \Pi$ transitions. These transitions cause the formation of the "magnetic series". The present paper was read at the Eighth Conference on Luminescence (Molecular Luminescence and Luminescence Analysis) which took place in Minsk from October 19 to 24, 1959. There are 2 figures and 6 references: 4 Soviet, 1 French, and 1 US. ✓

ASSOCIATION: Belorusskiy gos. universitet im. V. I. Lenina (Belorussian State University imeni V. I. Lenin)

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AUTHORS: Volod'ko, L. V., Sevchenko, A. N., Academician of the AS BSSR, and Umreyko, D. S.

TITLE: An Interpretation of the Electron and Vibration Spectra of Uranyl Nitrates ✓

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 3, pp. 560-563

TEXT: First, the authors discuss the well-known interpretation of the 860 cm^{-1} , 940 cm^{-1} , and 210 cm^{-1} uranyl salt frequencies. According to A. N. Sevchenko and B. I. Stepanov (Ref. 4) there are also harmonics and composite frequencies of the fundamental frequencies of UO_2^{++} ions in the infrared absorption spectrum. Ya. I. Ryskin interpreted the absorption spectrum obtained from etheric and ketonic solutions of uranyl nitrate on the basis of the oscillations of the free NO_3^- ion. The frequency deviations are explained through symmetrical disturbances of the NO_3^- ion. ✓

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An Interpretation of the Electron and Vibration Spectra of Uranyl Nitrates

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These four natural frequencies are given: 1050 cm^{-1} , 830 cm^{-1} , 1390 cm^{-1} , and 720 cm^{-1} . A discussing of the results of other authors leads to the assumption that in the infrared absorption spectrum of uranyl nitrate there are not only vibrations of the UO_2^{++} ion but also a considerable number of vibrations which are close to the vibrations of the NO_3^- anion. u

The interpretation of these frequencies points to a covalent binding characteristic of the nitrate anion with the uranyl ion. Tests which the authors conducted to study the absorption dichroism and the dependence of the degree of polarisation from the frequency of the exciting light showed up the existence of four electron transitions in the examined interval

from 20 to $29 \cdot 10^3 \text{ cm}^{-1}$. An analysis for the cause of the missing mirror symmetry in these absorption spectra and the emission of uranyl compounds leads also to the conclusion that several excited electron states exist in the uranyl ion. There are 2 figures, 1 table, and 10 references: 5 Soviet, 1 Indian, and 1 US.

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An Interpretation of the Electron and Vibration Spectra of Uranyl Nitrates

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ASSOCIATION: Belorusskiy gosudarstvennyy universitet im. V. I. Lenina
(Belorussian State University imeni V. I. Lenin)

SUBMITTED: July 25, 1960

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VOLOD'KO, L.V. [Valodz'ka, L.V.]; UMREYKO, D.S. [Umreika, D.S.]

Influence of secondary processes on the intensity of luminescence of
uranyl compounds. Vestsi AN BSSR Ser. fiz.-tekh. nav. no. 1:75-81
'61. (MIRA 14:4)

(Uranyl compounds—Optical properties) (Luminescence)

S/081/61/000/021/008/094
B102/B138

AUTHORS: Valodz'ka, L. V., Umreyka, D. S.

TITLE: Influence of secondary processes on the luminescence of uranium glass

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 28, abstract 21B230 (Izv. AN BSSR. Ser. fiz.-tekhn. n., no. 1, 1961, 75 - 81)

TEXT: It has been found that the secondary luminescence of uranyl compounds can be determined experimentally at room temperature. The intensity of the secondary luminescence of uranium glass and of an aqueous solution of uranyl nitrate was studied in dependence on the position of the luminescent layer (from the depth of excitation). Experimental and theoretical results are compared. [Abstracter's note: Complete translation.]

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SEVCHENKO, A.N. [Seuchanka, A.N.]; UMREYKO, D.S. [Umreika, D.S.]

Mirror symmetry and the nature of electron absorption spectra of
uranyl compounds. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.3:
37-44 '63. (MIRA 16:10)

SEVOCHERKO, A.H. [Sevchanka, A.H.; СЕВЧЕНКО, А.И.; Sevchenko, A.H.]

Mirror symmetry and the nature of the electron absorption spectra of uranyl compounds. Part 2. Vestnik AN SSSR. Ser. fiz.-tekh. nav. no.4:48-51 1983.

(HAM. 17:10)

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EWT(1)/BDS AFFTC/ASD/ESD-3/SSD

S/250/63/007/004/004/005

AUTHOR: Umreyko, D. S.

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TITLE: Effect of secondary processes on the law of attenuation of the
luminescence of uranyl compounds

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PERIODICAL: Akademiya Nauk BSSR. Doklady. v. 7, no. 4, 1963, 237-239

TEXT: The present work is a continuation of an earlier investigation by the author, with the difference that here emphasis is placed on experimentally verifying the theory that if the excitation of fluorescence is performed by weakly absorbing radiation, and the observations are performed in the portion of spectrum where the absorption coefficient is low (a part of the emission spectrum is reabsorbed), the attenuation of glow should obey the power law. The investigation was carried out by means of an all-purpose two-disk phosphoroscope. The experimental results were found to be in good agreement with theory.

There are two figures.

ASSOCIATION: Belorusskiy gosudarstvennyy universitet im. V. I. Lenina
(Belorussian State University imeni V. I. Lenin)

SUBMITTED: August 29, 1962
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